Aviation Logistics Automation
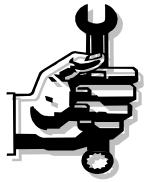
Background
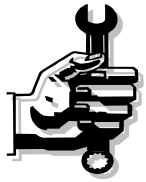
- ULLS-A is the Standard Army Information System (STAMIS) for Aviation.

    - Outdated hardware and software; is not fully in a Windows environment and is manpower intensive to operate.

    - Since 1997, the PM's focus has been basic sustainment and/or emergency ECP-S, verses full life cycle support per HQDA guidance.

- Significant number of Aviation units have "turned off" ULLS-A entirely, using other software, have supplemented ULLS-A or reverted to a manual processes.

- No enforced standard for Aviation automation; wide disparity in automation among units.

- Multiple, competing funding streams as Aviation community develops unique/stovepipe systems.

- Deployability & interoperability at risk.

Task Force Mission

- Aviation Task Force directed CASCOM to conduct an evaluation of current Aviation automation systems.

- Intent is to re-establish a standard system.

- TF stated the chosen system should be:

  (1) Available for rapid fielding/use.

  (2) Reduce the burden to unit/soldier.

  (3) Provide increase functionality.

  (4) Be affordable.

  (5) Bridge to, but not specifically be a part of, GCSS-Army.
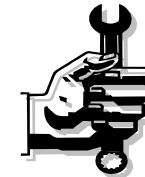
"Two Distinct Issues"

System to Standardize Aviation Until GCSS-A
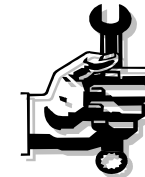
2003
ULLS-A
CTS-A
AMAC
MANUAL **ELAS**

GCSS-Army

Our Focus!

Data flow from the platform to the enterprise

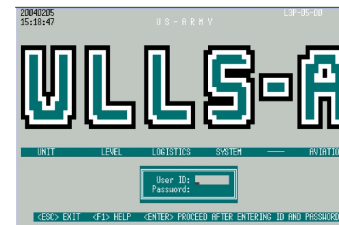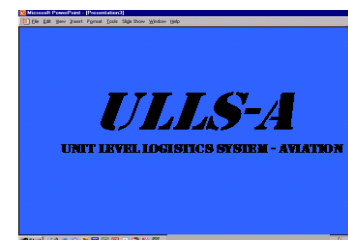**Weapon System**

Candidates

COA 1: ULLS-A

(Current) . . . .

COA 2: ULLS-A (GUI Windows) . . . .

COA 3: CTS-

A . . . .

COA 4: AMAC . . . .

.

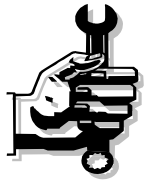# Assumptions

- DA Pam 738-751, The Army Maintenance Management System-Aviation (TAMMS-A) will not change significantly prior to fielding of GCSS-A; selected system will operate under current business rules.

- Software development and integration must be complete the end of 3rd Qtr FY 04.

- Software and hardware testing will take place 4th Qtr FY04.

- Selected system fielding begins 1st Qtr FY05.

Results
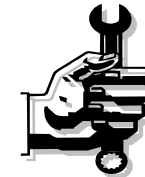
|	ULLS-A SCP 5 (Current Baseline)	ULLS-A Windows	**CTS-A**	AMAC
Availability (Screening Criteria)	Y	N	**Y**	N
MMHR Reduction in Baseline Functionality	2	n/e	**1**	3*
MMHR Reduction due to Increased Functionality	3	n/e	**1**	2*
Affordability	1	n/e	**2**	3*
TOTAL (Less is Better)	6	n/e	**4**	8*

n/e = Not Evaluated.

AMAC lacked several basic functions and was evaluated only on tasks it could perform.

Recommendations
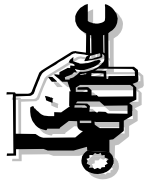
Task Force Recommendation

- Resolve Near Term Inefficiencies

Other Observations/Recommendations

- Capitalizing on Current Efforts
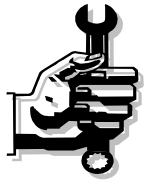
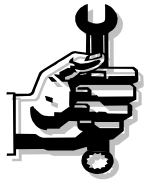- Path Forward

APPROVED

Recommendation Task Force Tasker

Resolve Near Term Inefficiencies

- Field Common Transitional System – Army (160th SOAR (A)

  (CTS-A) as Unit Level Logistics System – Aviation (ULLS-A) Software Change Package (SCP) 6 as ULLS-A "Enhanced" ULLS-A (E).

  - ✓ Resource the PM to transition, finalize development, field, and sustain CTS-A as ULLS-A SCP 6.

ULLS-A (E) Highlights

Aircraft Logbook

- Automates the Logbook and Historical Records

Aircraft Maintenance

- Manages Phase Inspections and Work Task Distribution
- Manages Back Shop and Work Order Based Maintenance

Supply Chain Management

- Manages the Requisition Processes

Aviator Records Management

- Produces all Flight Record Output Product
- Manages all Army Aviator Record Keeping Requirements

Decision Support, Ad Hoc Query and Reporting

- Reliability, Readiness, Maintainability
- Graphical ad-hoc query utilities simplify data inquiry

What's Going Away?
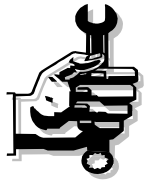
Army Materiel Status System (AMSS)

Background:_

- Designed to replace the manual readiness reporting requirements outlined in AR700-138.

- Intent was to have ULLS-A via the AMSS end-of-report-period file and Commander's Statement replace the DA Form 1352.

- ULLS-A would have become the system of record, once fully incorporated.

Linking the Fault to Supply and Readiness Reporting

Training Impacts ULLS-A (E)
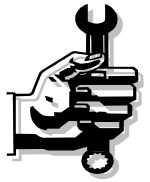
- Evolutionary step from ULLS-A to ULLS-A (E)
  - Identical processes and functions (TAMMS-A)
  - Windows makes ULLS-A (E) more intuitive

- New Equipment Training (during fielding)
  - User manuals already developed
  - Net training package development

- Institutional Training
  - POI modification (update) anticipated
  - Hardware requirements under review

Hardware Architecture ULLS-A (E)

Management Layer

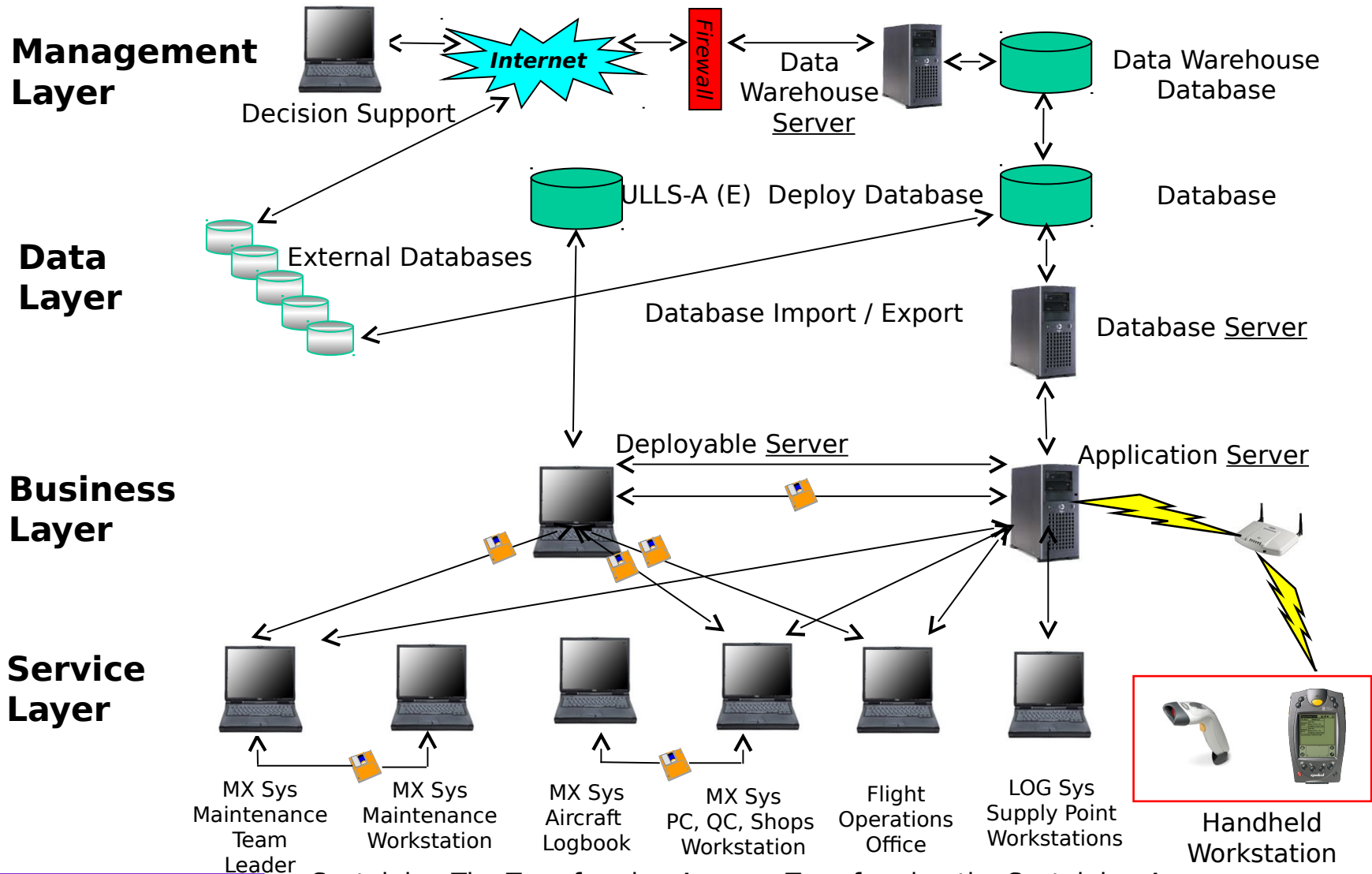Decision Support — *Internet* — *Firewall* — Data Warehouse Server — Data Warehouse Database

Data Layer

External Databases

ULLS-A (E) Deploy Database — Database

Database Import / Export — Database Server

Business Layer

Deployable Server — Application Server

Service Layer

MX Sys Maintenance Team Leader Workstation

MX Sys Maintenance Workstation

MX Sys Aircraft Logbook

MX Sys PC, QC, Shops Workstation

Flight Operations Office

LOG Sys Supply Point Workstations

Handheld Workstation

Sustaining The Transforming Army … Transforming the Sustaining Army
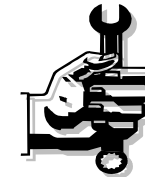
Servers

Communication Server

*Pentium IV Class
Workstation
Microsoft Windows 2000
CD/DVD, USB, PCMCIA
512 MB RAM, 20 GB HDD
TCP/IP 10/100 NIC*

Application/Database Server

*1.26 GhZ Pentium IV Class Server
Microsoft Windows 2000 Server
CD/DVD, USB, PCMCIA
2 GB SDRAM, 5 36GB SCSI HDD
Single Processor
Tape Backup
TCP/IP 10/100 NIC*

Migration Parser Server

*1.26 Ghz Pentium IV Class
Server
Microsoft Windows 2000
Server
CD/DVD, USB, PCMCIA
2 GB SDRAM, 5 36 GB SCSI
HDD
Single Processor
Tape Backup
TCP/IP 10/100 NIC*

Data Warehouse Server

*2.8 Ghz Pentium IV Class
Server
Microsoft Windows 2000
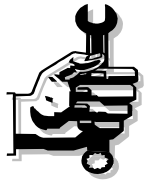Server
CD/DVD, USB, PCMCIA
2 GB SDRAM, 5 36 GB SCS
HDD
Single Processor Tape Backup
TCP/IP 10/100 NIC*

Recommendations Other

Capitalizing on Current Efforts

✓ **Cargo PMO will field and sustain the effort formally known as "Advanced Maintenance Aid Concept" (AMAC) to the CH-47 fleet as that fleet's "Platform Maintenance Environment" (PME).**

✓ **CH-47 units will utilize ULLS-A (E) as a conduit to support the required processes within "The Army Maintenance Management System - Aviation" (TAMMS-A), the Army's supply system and current readiness reporting metrics.**

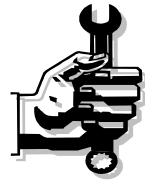✓ **CH-47 units will be fielded the CH-47 PME once the unit is utilizing ULLS-A (E)**
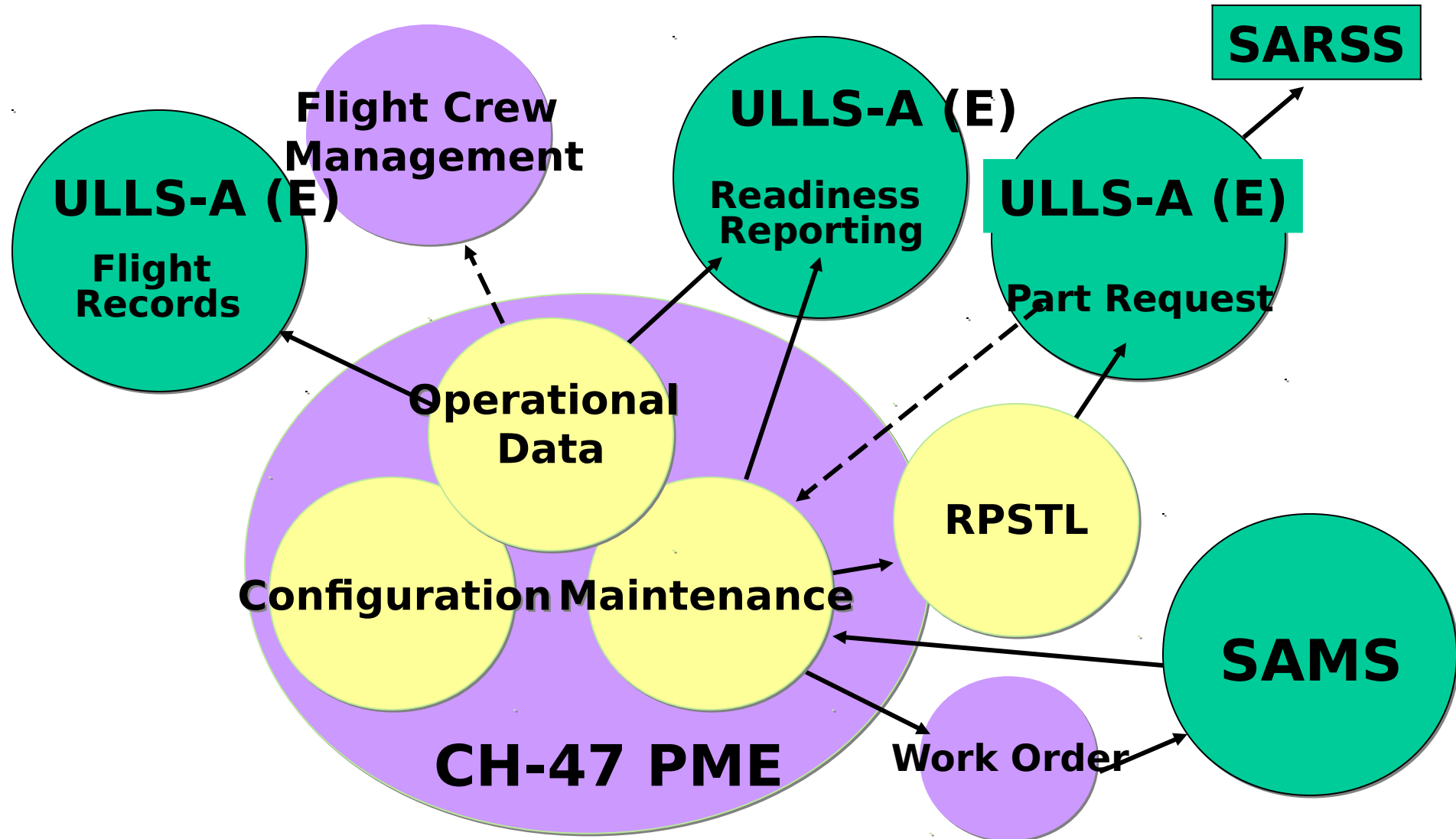
What is a PME?
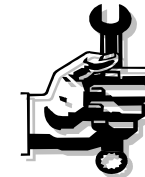
PME is a custom application designed specifically for an individual platform to support maintenance, maintenance management, life cycle management and configuration control with the capability to operate in real time or near real time parameters.

- Scope (Highlights):

  – Encompass both "'AT AIRCRAFT" processes while retrieving "ON AIRCRAFT" data to support the Common Logistics Operating Environment.

  – Built on a single "standard" digital architecture applicable across all aviation fleets.

  – Links the maintainer to the Army peripheral support structures through a highly responsive application.

  – Integrates technical manuals, tech data and tasks into a centralized processes.

CH-47 PME Interoperability

SARSS

Flight Crew Management

ULLS-A (E)

ULLS-A (E)
Readiness Reporting

ULLS-A (E)

ULLS-A (E)
Flight Records

Part Request

Operational Data

RPSTL

Configuration Maintenance

SAMS

CH-47 PME

Work Order

Sustaining The Transforming Army ... Transforming the Sustaining Army

CW4 Carthron / G4 / DALO-SMV/DSN 224-0747

CH-47 PME Hardware Architecture

SYSTEM / EASE Source DATA

Local Network

Hanger/Hanger Connection

Unit PME Network

Flight line Client

Internet

MAINTENANCE DATA WAREHOUSE

T1

Netscreen 5XP

IPSec Tunnel

Hanger Client

Cisco 1710

Unencrypted

PME Server

Wireless Network (Optional)

Cisco 1710

Flight line Wireless Client

AES Encrypted

AES Encrypted

Security Server

AES Encrypted

WLAN Switch

Access Points

Hanger Wireless Client

Sustaining The Transforming Army … Transforming the Sustaining Army

CW4 Carthron / G4 / DALO-SMV/DSN 224-0747
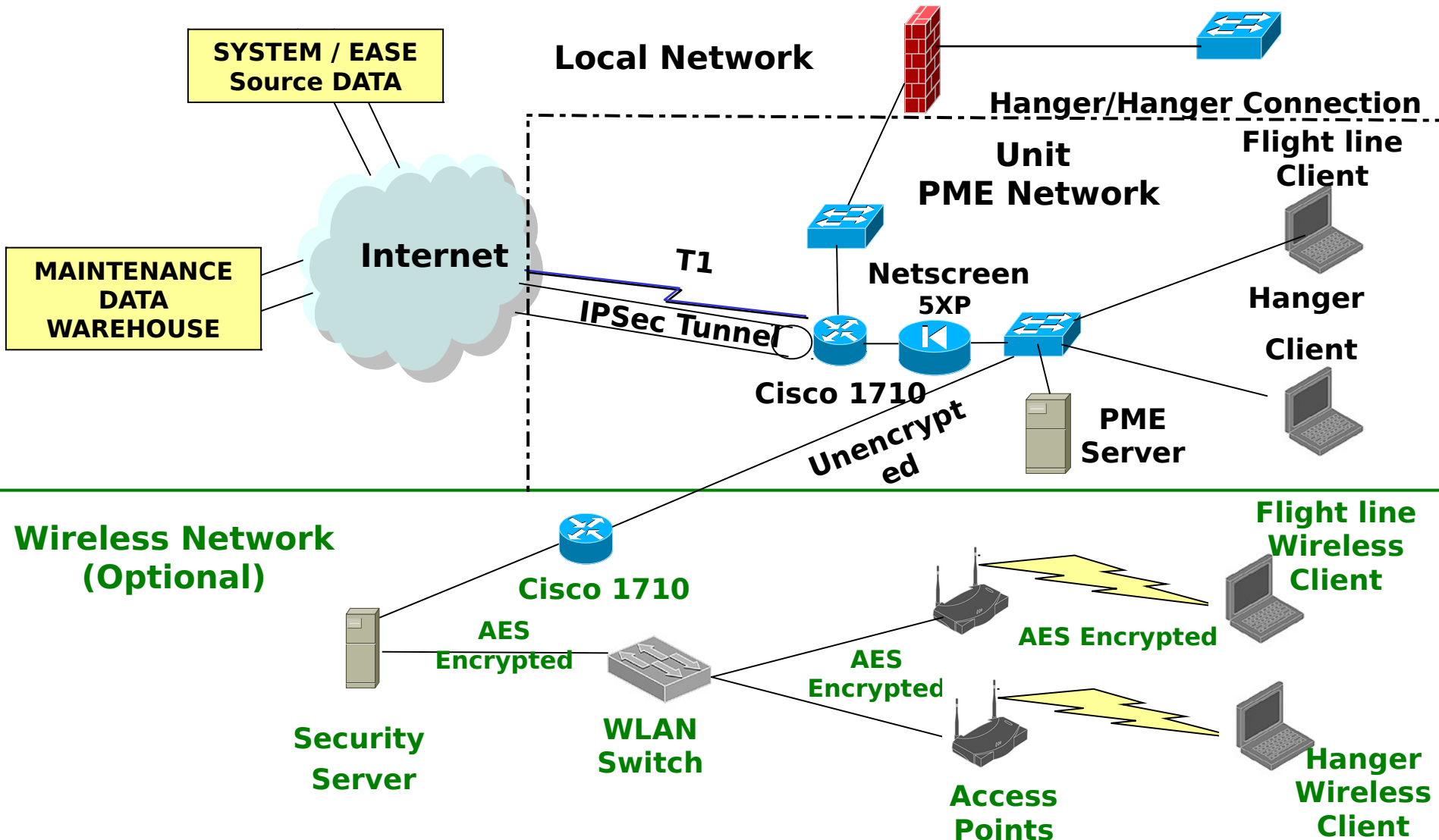
Recommendation Other
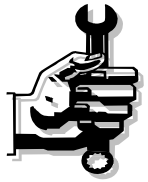
Path Forward

Program Managers will begin developing a Strategy and Path Forward to transition the weapons system they support to their specific PME.
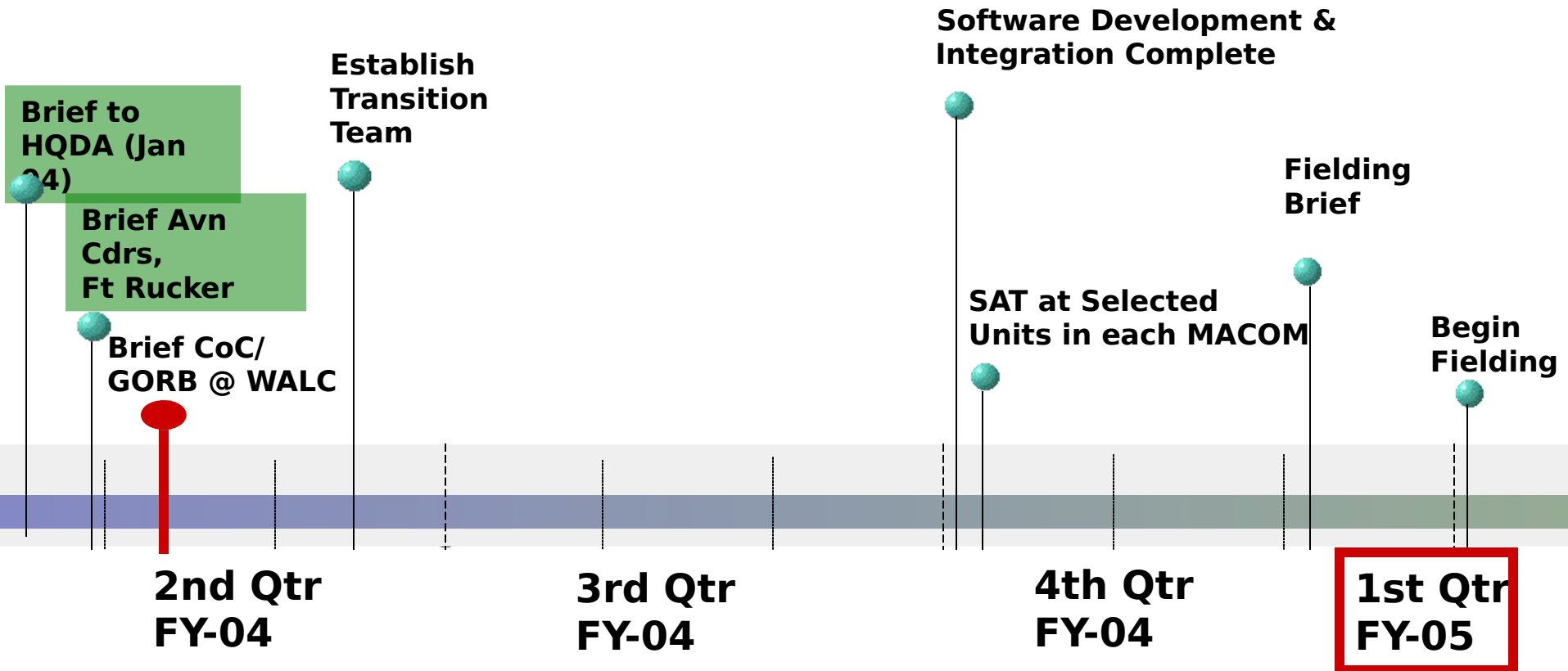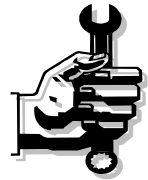
➢ Develop a Transition Strategy identifying funding requirements, timelines needed to accomplish their transaction.

What to Consider?

- Data Collection
- IETMs
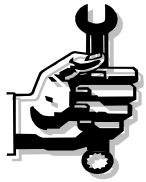- AIT
- CLOE
- Training
- UID
- CBM

Milestone Schedule

Software Development & Integration Complete

Establish Transition Team

Brief to HQDA (Jan 04)

Brief Avn Cdrs, Ft Rucker

Fielding Brief

Brief CoC/ GORB @ WALC

SAT at Selected Units in each MACOM

Begin Fielding

2nd Qtr FY-04

3rd Qtr FY-04

4th Qtr FY-04
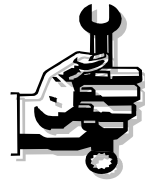
1st Qtr FY-05

Critical Paths

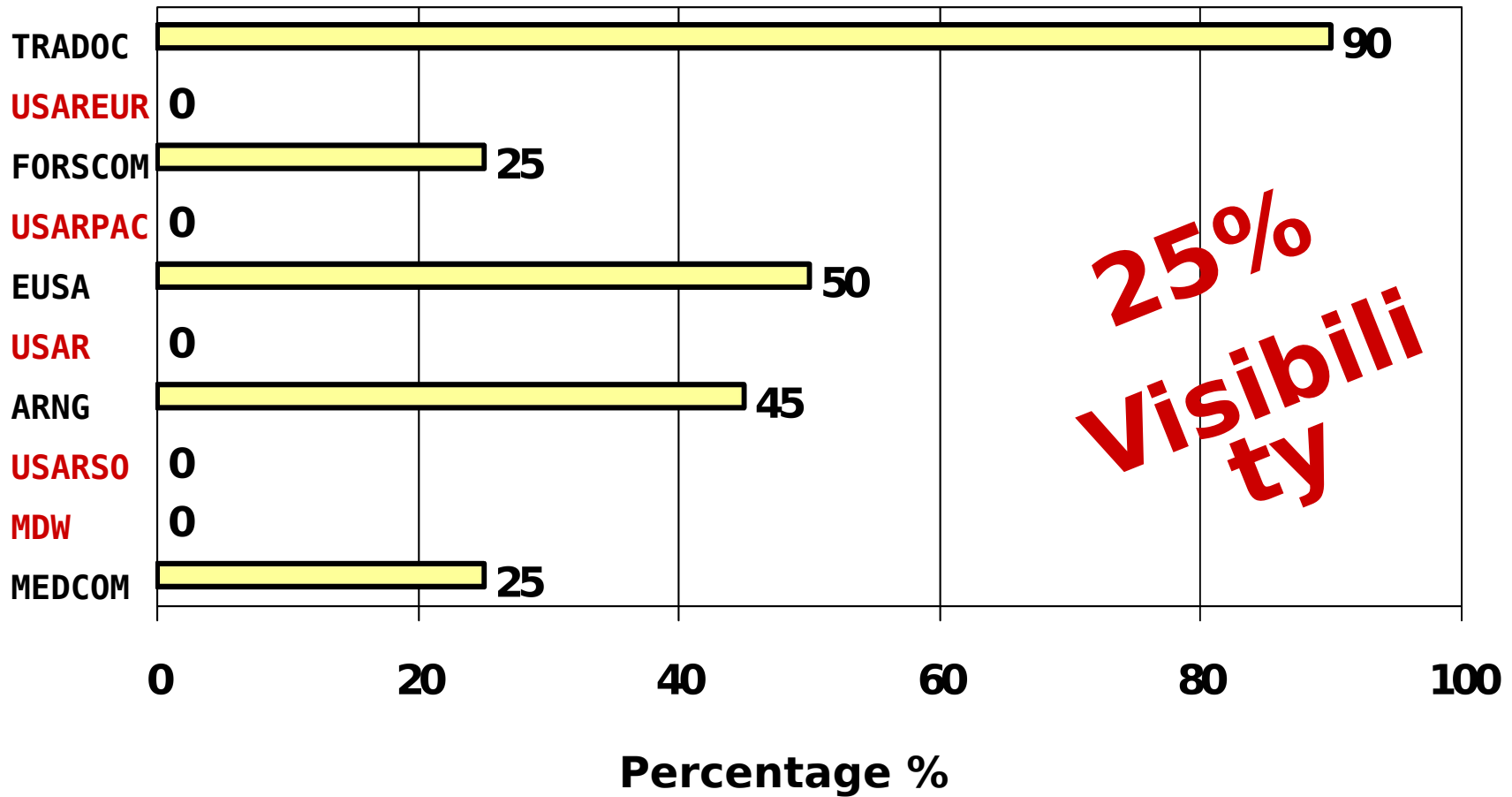Capturing all costs and securing the funds to field, train, and implement ULLS-A (E):

- Final Software Development

- Fielding

  - Implementation

  - Hardware Procurement

  - Initial Training

Needs to start yesterday!!

- Sustainment

  - Critical System Enhancements

  - Hardware (repairs/floats)

- Institutional Training
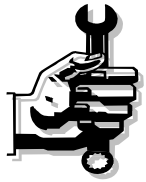
MACOM Hardware

Chart: Percentage % (horizontal bar chart)

- TRADOC: 90
- USAREUR: 0
- FORSCOM: 25
- USARPAC: 0
- EUSA: 50
- USAR: 0
- ARNG: 45
- USARSO: 0
- MDW: 0
- MEDCOM: 25

Percentage %

25% Visibility

Here's the Problem

BLUF - The UFR associated with fielding replacement hardware to support this technology across 100% of all fleets in the near term (FY05) is cost prohibitive and <u>WILL NOT COMPETE</u> for funding, thus will probably remain a UFR.
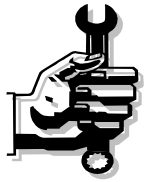
Hardware - Based on a sample data collection from the field, known performance capabilities of hardware issued and what MACOMs have reported to date, it will be impossible to field this capability to the aviation community in the near term without immediate replacements.

Why? The ERP IOC grows closer everyday. Everyday that passes, the "value added" <u>strength</u> for aviation automation or any IT system to compete for funding resources diminishes. One day in the very near future, the majority of all funding to support current IT systems will be diverted to GCSS-A.

Discussion

Questions